

WHAT IS CLAIMED IS:

Subt. a,
1. A touch sensor type liquid crystal display
comprising:
a liquid crystal display panel having first and second
5 substrates arranged oppositely to each other by a specified
gap;
gap controlling spacers, each of which restricts a
width of the gap and a spacer movement in a planar
direction; and
10 a touch sensor added to the liquid crystal display
panel including fixed and movable electrode plates.

2. The touch sensor type liquid crystal display
according to claim 1, wherein said gap controlling spacers
15 are regularly arranged in a planar direction of the liquid
crystal display panel.

3. The touch sensor type liquid crystal display
according to claim 2, wherein arranged densities of said gap
20 controlling spacers are set according to the number of times
of touching the touch sensor.

4. The touch sensor type liquid crystal display according to claim 2, wherein an arranged density of said gap controlling spacers is high in a center of the liquid crystal display panel.

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5. A touch sensor type liquid crystal display comprising:

a liquid crystal display panel having array and color filter substrates arranged oppositely to each other by a specified gap;

a gap controlling spacer for restricting a width of the gap and a spacer movement in a planar direction;

a touch sensor added to the liquid crystal display panel including fixed and movable electrode plates; and

a grid arranged between the fixed and movable electrode plates,

wherein arranging positions of said gap controlling spacer and said grid are coincident with each other.

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6. The touch sensor type liquid crystal display according to claim 5, said display being constructed by

laminating together said liquid crystal display panel having the array and color filter substrates arranged oppositely to each other by interpolating a liquid crystal layer, and a touch sensor panel having the movable and fixed electrode plates arranged oppositely to each other by a specified gap.

7. The touch sensor type liquid crystal display according to claim 6, wherein said movable and fixed electrode plates are made of plastic films.

8. The touch sensor type liquid crystal display according to claim 5, wherein said array and color filter substrates of the liquid crystal display panel are arranged oppositely to each other by interpolating a liquid crystal layer, said movable electrode plate serves as a touch sensor arranged oppositely to the color filter substrate by a specified gap, and a conductive film is provided to serve as a touch sensor formed on a surface opposite the movable electrode plate of the color filter substrate.

9. The touch sensor type liquid crystal display according to claim 8, wherein said movable electrode plate is made of a plastic film.

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5 10. A touch sensor type liquid crystal display comprising:

a liquid crystal display panel having first and second substrates arranged oppositely to each other by a specified gap;

10 a gap controlling spacer formed in a columnar shape for restricting a width of the gap; and

a touch sensor added to the liquid crystal display panel including movable and fixed electrode plates.

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15 11. The touch sensor type liquid crystal display according to claim 10, wherein said gap controlling spacer is arranged in a black matrix region of the liquid crystal display panel.

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20 12. A touch sensor type liquid crystal display comprising:

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a liquid crystal display panel having first and second substrates arranged oppositely to each other by a specified gap;

a touch sensor added to the liquid crystal display panel including movable and fixed electrode plates; and

a gap controlling spacer for restricting a width of the gap,

wherein said gap controlling spacer is brought into surface-contact with one selected from the first and second substrates, the gap therebetween being restricted by the gap controlling spacer.

13. A liquid crystal display comprising:

a liquid crystal display panel having first and second substrates arranged oppositely to each other by a specified gap; and

gap controlling spacers, each of which restricts a width of the gap and a spacer movement in a planar direction,

wherein arranged densities of said gap controlling spacers are not uniform.

14. The liquid crystal display according to claim 13, wherein an arranged density of said gap controlling spacers is high in a center of the liquid crystal display panel.

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